Infinity

RS-8/RS-8a

Reference Series

Speaker System

SERVICE MANUAL

Infinity Systems, Inc
250 Crossways Park Dr.
Woodbury, New York 11797

REV 2 6/2001

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IMPORTANT NOTE:

THIS MANUAL IS FOR BOTH MODELS RS-8 and RS-8a.
MODEL RS-8 DOES NOT HAVE AN "M" IN THE SERIAL NUMBER.
MODEL RS-8a HAS AN "M" IN THE SERIAL NUMBER.
serial number is located in the speaker input cup.

Specifications

PERFORMANCE DATA	Recommended Amplifier Power:	15 ~ 175W
	Frequency Range:	32 ~ 20,000Hz
	Sensitivity: (2.83 V @ 1 m)	92dB
	Nominal Impedance:	8 W
	Subwoofer-Amplifier Power:	100W
DRIVE UNITS	Bass:	8" (203mm)
	Midbass:	6-1/2" (165mm)
	High Frequency:	1" (25mm)
DIMENSIONS	Height, Width, Depth:	40 x 7-1/2 x 12-3/4" (1016 x 191 x 324mm)

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RS8 Amplifier, 100W Powered Sub/Plate Amp

LINE VOLTAGE	Yes/No	Hi/Lo Line	Nom.	Unit	Notes
US 120vac/60Hz	Yes	108-132	120	Vrms	Normal Operation
EU 230vac/50-60Hz	Yes	207-264	230	Vrms	Normal operation, MOMS required

Parameter	Specification	Unit	QA Test Limits	Conditions	Notes
Amp Section					
Type (Class AB, D, other)	AB	---	n/a		
Load Impedance (speaker)	4	Ohms	n/a	Nominal	Z-curve required
Rated Output Power	100	Watts	90	1 input driven	
THD@ Rated Power	0.1	%	0.5	22k filter	
THD @ 1 Watt	0.3	%	1	22k filter	
DC Offset	10	mV-DC	20	@ Speaker Outputs	
Damping factor	>200	DF	100		
Input Sensitivity					
Input Frequency	50	Hz	50	Nominal Freq.	1 input driven
Line Input	600	mVrms	±2dB	To Rated Power	1 input driven
Speaker/Hi Level Input	6	Vrms	±2dB	To Rated Power	(-20dB below Line In)...1 input driven
Signal to Noise					
SNR-A-Weighted	100	dBA	90	relative to rated power	A-Weighting filter
SNR-unweighted	70	dBr	70	relative to rated power	22k filter
SNR rel. 1W-unweighted	60	dBr	55	relative to 1W Output	22k filter
Residual Noise Floor	1	mVrms	5	Volume @max, using RMS reading DMM/VOM (or A/P)	
Residual Noise Floor	0.8	mVrms(max)	4	Volume @max, w/ A/P Swept Bandpass Measurement (Line freq.+ harmonics)	
Input Impedance					
Line Input	20k	ohms	n/a	Nominal	
Speaker/Hi Level Input	10k	ohms	n/a	Nominal	
Filters					
Low Pass (fixed or variable)	fixed				
Low Pass filter (point or rang	Yes/TBD	Hz	±2dB		
Slope	18	dB/Octave	--		
Q	TBD	Damping	--		
Subsonic filter (HPF)	TBD	Hz	±2dB		
Slope	12	dB/Octave	--		
Q	TBD	Damping	--		
Limiter (yes/no)	Yes				
THD at Max. Output Power	5	%	functional	Maximum Output Power	Maximum THD as a result of limiting.
Features	--				
Volume pot Taper (lin/log)	linear	--	functional		
Input Configuration	--	--			
Line In (L,C,R,AC3,Mono)	AC3(flat),and Mono	--	functional	Line/Spkr Input Select Switch	
Spkr/Hi Level In (L,C,R,mono)	Mono	--	functional	Line/Spkr Input Select Switch	
Signal Sensing (ATO)			--		
Auto-Turn-On (yes/no)	yes		functional		
ATO Input Frequency	100	Hz	functional		
ATO Level	2	mV	functional	1kHz into Line Input w/ 1 ch. driven	
ATO Bandwidth	5k	Hz	functional	ATO-LPF for noise immunity	
ATO Turn-on time	5	ms	functional	Amp connected and AC on, then input signal applied	
Auto Mute/ Turn-OFF Time	15	minutes	10	T before muting, after signal is removed	
Power on Delay time	3	sec.	4	AC Power Applied	
Transients/Pops					
ATO Transient	5	mV-peak	n/a	@ Speaker Outputs	
Turn-on Transient	50	mV-peak	n/a	@ Speaker Outputs	AC Line cycled from OFF to ON
Turn-off Transient	50	mV-peak	n/a	@ Speaker Outputs	AC Line cycled from ON to OFF
Efficiency					
Stand-by Input Power	10	Watts	15	@ nom. line voltage	
AC Power Cons.@1W	TBD	Watts	n/a	@ nom. line voltage	Informational
Power Cons.@rated power	200	Watts	n/a	@ nom. line voltage	143W if Class D (@70% efficiency)
Protection					
Short Circuit Protection	preferred		functional	Direct short at output	
Thermal Protection	yes		functional	@1/8 max unclipped Power	
DC Offset Protection	yes		functional	DC present at Speaker Out leads	Relay or crowbar (for driver/fire protection)
Line Fuse Rating	RS-8 (120v) 3.0A	Amps	functional	Type-T or Slo Blo	External fuse with UL/SEMKO rated holder
	RS-8 (230v) 2.0A	Amps	functional	Type-T or Slo Blo	External fuse with UL/SEMKO rated holder
	RS-8a 2.5A	Amps	functional	5 x 20mm Slo-Blo	External fuse with UL/SEMKO rated holder

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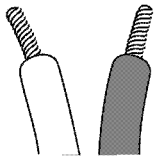
TURN OFF ALL POWER...

WIRING THE SYSTEM

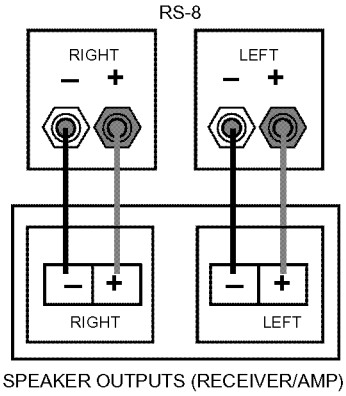
IMPORTANT: Make sure all equipment is turned off before making any connections

Connection Tips



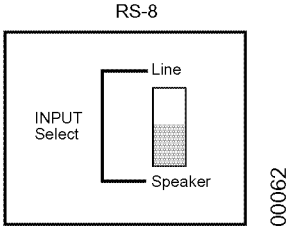
Speakers and electronics terminals have corresponding (+) and (-) terminals. It is important to connect both speakers identically: (+) on the speaker to (+) on the amplifier and (-) on the speaker to (-) on the amplifier. Wiring "out of phase" results in thin sound, weak bass and a poor stereo image.

If your receiver does not have a subwoofer output:



SPEAKER OUTPUTS (RECEIVER/AMP)

Set Input Select switch to Speaker



WIRING THE SYSTEM (Continued)

If your receiver has a subwoofer output:

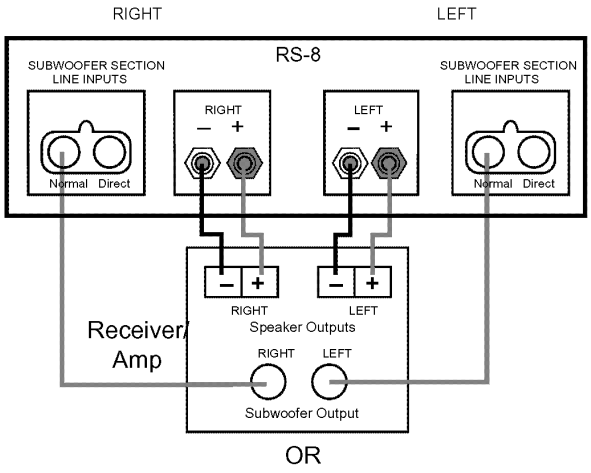
The RS-8 incorporates two different types of line-level inputs that allow you to optimize the loudspeakers' performance in your system.

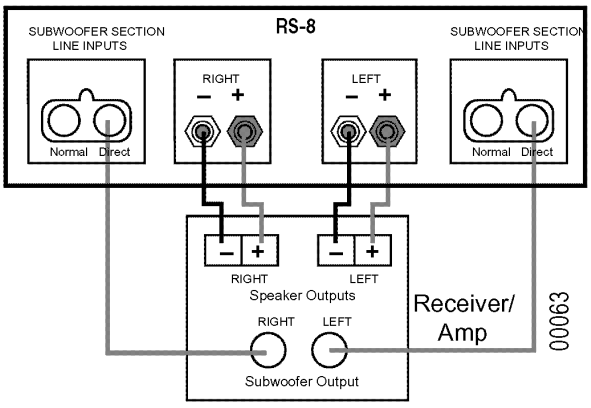
If your receiver/processor's subwoofer output is already low-passed filtered, meaning the high frequencies have been removed by the receiver, use the subwoofer input labeled Direct.

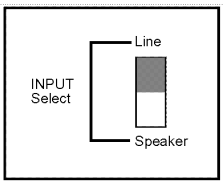
If your receiver/processor's subwoofer output is full range, meaning the high frequencies have not been removed by the receiver, use the subwoofer input labled Normal.

If you are unsure as to which type of subwoofer output your receiver/processor contains, please consult your receiver/processor owner's manual or contact the manufacturer.

Do not hook up both inputs. Doing so will adversely affect the performance of the system.







Set Input Select switch to "Line."

NOTE: Some receivers/amplifiers have a single (mono) subwoofer output. In this case, it is necessary to use a "Y"-connector (not included) to properly hook up the speakers using this method.

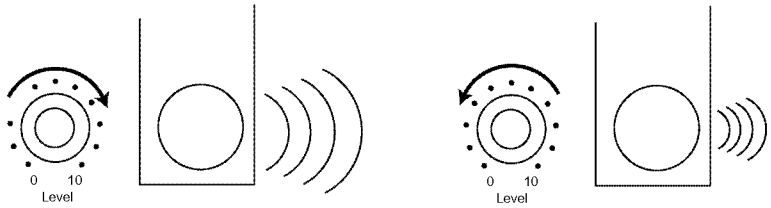
FINAL ADJUSTMENTS

Check the speakers for playback, first by setting the system volume control to a minimum level and then by applying power to your audio system. Play a favorite music or video segment and increase the system volume control to a comfortable level.

Note: You should hear balanced audio reproduction across the entire frequency spectrum. If not, check all wiring connections or, for more help, consult the Authorized Infinity Dealer where you purchased the system.

The amount of bass you hear will be affected by a number of different factors, including the room's size and shape, the construction materials used to build the room, the listener's position relative to the speakers and the position of the speakers in the room.

To fine-tune the bass output, simply adjust the level control at the rear of the speaker.



Listen to a variety of music selections and note the bass level. Increase or decrease to the level you prefer.

AUTO - ON SWITCH

When the Auto/On is set to ON (and AC Power switch is also ON), the RS-8's auto-sensing circuit will automatically turn on the subwoofer when a signal is detected. As long as a signal is present, the RS-8 will stay ON (as indicated by a Green LED). When the signal is absent after approximately 8-10 minutes, the auto-sensing circuit will shut down the system, in the "stand-by" mode (as indicated by a Red LED).

When the Auto Power switch is set to OFF (and AC Power switch is ON), RS-8's auto-sensing circuit is defeated, as indicated by a constantly lit Green LED; the RS-8 is energized whether or not it is receiving a signal.

NOTE: The Auto/On switch is not a true power switch and the amplifier is fully energized no matter what position this switch is in.

For extended periods of non-use, or vacations, it is recommended that the RS-8 be turned OFF with the Main Power Switch.

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Trouble Shooting

If there is no sound from any of the speakers, check the following:

- Receiver/amplifier is on and source is playing.
- Review proper operation of your receiver/amplifier.

If there is no sound coming from one speaker, check the following:

- Check the "Balance" control on your receiver/amplifier.
- Check all wires and connections between receiver/amplifier and speakers.
- Make sure all wires are connected. Make sure none of the speaker wires are frayed, cut or punctured.

If the system plays at low volumes but shuts off as volume is increased, check the following:

- Check all wires and connections between receiver/amplifier and speakers.
- Make sure all wires are connected. Make sure none of the speaker wires are frayed, cut or punctured.
- If more than one pair of main speakers is being used, check the minimum impedance requirements of your receiver/amplifier.

If you used the high-level (speaker) inputs only and there is no sound from any of the speakers, check the following:

- Receiver/amplifier is on and a source is playing.
- Check all wires and connections between receiver/amplifier and speakers. Make sure all wires are connected. Make sure none of the speaker wires are frayed, cut or punctured.
- Review proper operation of your receiver/amplifier.

If there is low bass output, check the following:

- Make sure the connections to the left and right "Speaker Inputs" have the correct polarities (+ and -)
- Make sure that the RS-8 is plugged into an active electrical outlet.
- Adjust the subwoofer-level control.
- Make sure the input-select switch is in the correct position (pages 5, 6)

If you used the line-level inputs and there is no sound from the subwoofer, check the following:

- Receiver/amplifier is on and a source is playing.
- RS-8 is plugged in.
- Check all wires and connections between receiver/amplifier and speakers. Make sure all wires are connected. Make sure none of the wires are frayed, cut or punctured.
- Review proper operation of your receiver/amplifier.
- Make sure the input-select switch is in the correct position (pages 5, 6)

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Service Bulletin

Service bulletin INF9901 - March 1999 — This is considered a Minor repair

To: All Infinity Service Centers

Models: RS-8, RS-10 Powered Loudspeaker (all units with "M" in serial number)*

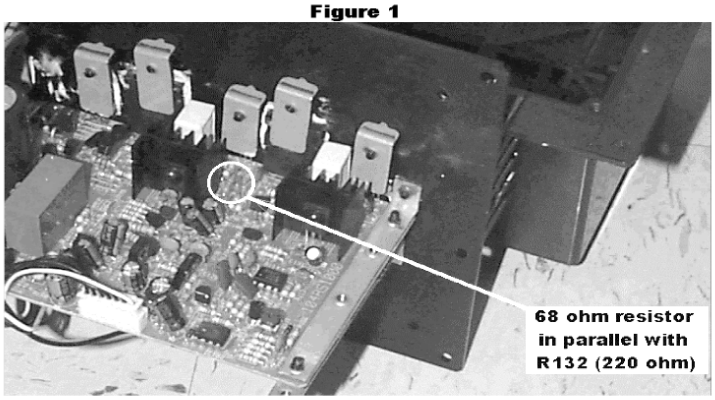
Subject: Amplifier plate overheating, reduction in idling current

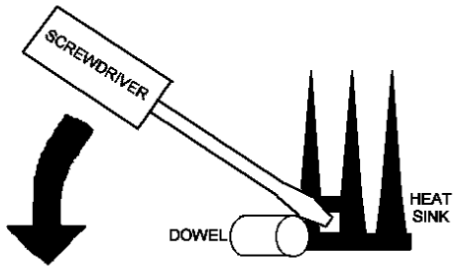
* Number is located in the speaker input cup.

In the event you receive a RS-8 or RS-10 Powered Loudspeaker with the complaint "amplifier plate is getting too hot", or "amplifier is blowing fuses", perform the necessary steps listed below. This procedure should be performed on all RS-8 or RS-10 amplifiers being serviced for *any* reason:

1. Lay the loudspeaker on its side, on a padded surface.
2. Remove (12) screws holding amplifier assembly to cabinet, remove amplifier. When amplifier plate seems "stuck" then see illustration below. Input, output, and LED wires do not need to be disconnected.
3. Remove (8) screws holding plastic cover to amp plate, pull cover off; gain access to top of Power Supply PCB.
4. Tack-solder a 68 ohm ¼W resistor (Infinity part# 5174-680381) in parallel with R132 (220 ohm) on the top side of the Power Supply PCB (see Figure 1 for location).
5. Locate and cut out C130 (between heatsink and bridge rectifier).
6. (RS10 only) - Additionally, locate and cut out C129 (near the AC power cable connector and the large filter caps).
7. Re-connect any molex connectors that were unplugged. Caution: two connectors are identical in size and could be misplaced; the white/black molex cable connects to the female connector closest to the heatsink. If strain relief plug was removed, replace and seal plug on the rear of plastic cover with suitable glue, silicon seal or hot-melt.
8. Replace plastic cover and (8) cover screws. Place amplifier assembly in cabinet; replace all (12) screws.
9. Functional Test - Connect AC Wattmeter to AC input line, turn the unit ON.
10. Connect music signal from a CD source and increase volume to medium level to verify sound from the loudspeaker.
11. Conduct warm-up for 10 minutes, remove music signal. Input power should not exceed 20 watts.

Figure 1





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Units that have been modified by the factory may be identified by a white numbered label that was attached to the top of the amplifier cover (amplifier must be removed from cabinet to see); additionally there is a single digit difference in the date code in the label on the loudspeaker's outer carton.

Model	Label number (120V)	**Carton date Code**	**Status**	**Action**
RS8/RS10	No Label present	X**8**X-XXXX	Needs Modification	RS-8, Cut C130 RS-10, Cut C129 & C130
RS-8	AVS0199-0001 to AVS0199-2692	X**9**X-XXXX	Modified by factory	NONE REQUIRED
RS-10	AVSRS10-0001 to AVSRS10-1338		Modified by factory	NONE REQUIRED

Infinity Systems, Inc. 250 Crossways Park Dr. Woodbury, New York 11797 (516) 496-3400

ACOUSTIC & ELECTRICAL SPECIFICATIONS

- Nominal Impedance 8 ohms
- Max Amp Power 175 watts
- Frequency Response 32Hz - 20kHz
- Sensitivity 92 dB (1 watt @ 1 meter)
- Crossover Frequency 110 Hz, 2.7 kHz
- Subwoofer Amplifier Power 100 watts

SYSTEM COMPONENTS:

- Cabinet (L/R) RS-8/RS-8a (Not for Sale)
- Subwoofer Grille 334436-001
- Upper Grille 333203-001
- Lower Grille 334540-001
- Low Frequency Transducer 8" (203mm) Woofer (334426-001)
  DC Resistance 4.4 ohms ±10%
- Mid/low Frequency Transducer 6 1/2" (160mm) Co-injected Woofer Shielded (334041-001)
  DC Resistance 3.4 ohms ±10%
- High Frequency Transducer 1" (25mm) Neodymium Soft Dome (333232-001)
  DC Resistance 3.6 ohms ±10%
- Crossover Network 334425-001

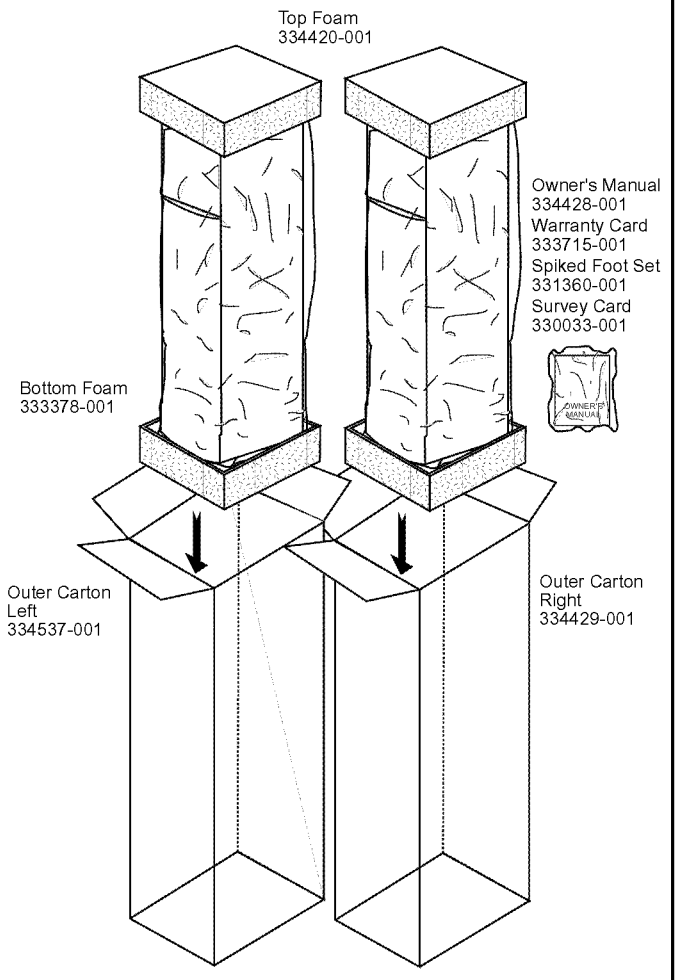
AURAL SWEEP TEST SPECIFICATIONS:

- System Aural Sweep Test 6.0V Input 20 Hz to 20 kHz
- L.F. Aural Sweep Test 5.0V Input 20 Hz to 200 kHz
- M.F. Aural Sweep Test 4.0V Input 100hz to 3 kHz
- H.F. Aural Sweep Test 2.83V Input 2 kHz to 20 kHz

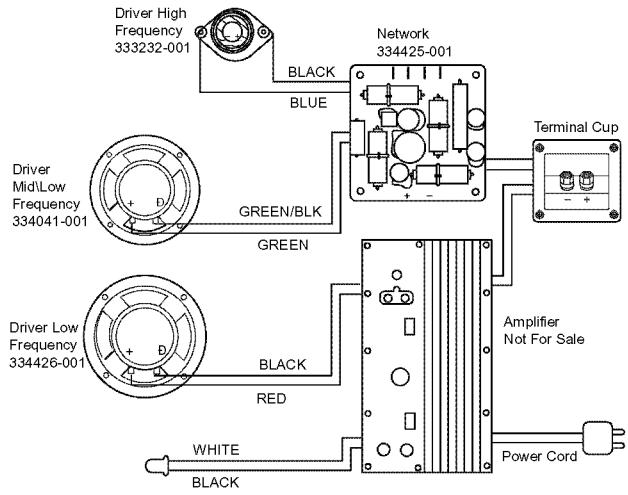
PHYSICAL SPECIFICATIONS:

- Enclosure dimensions: 40 x 7 1/2 x 12 3/4" (H x W x D) 1016 x 191 x 324mm
- Weight 52 lbs. (23.6kg) Each

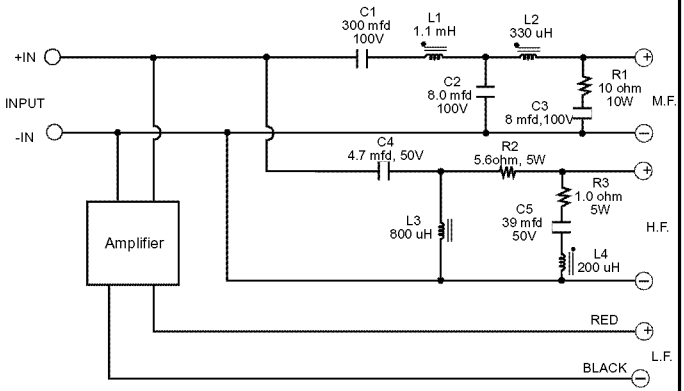
PACKAGING



WIRING DIAGRAM



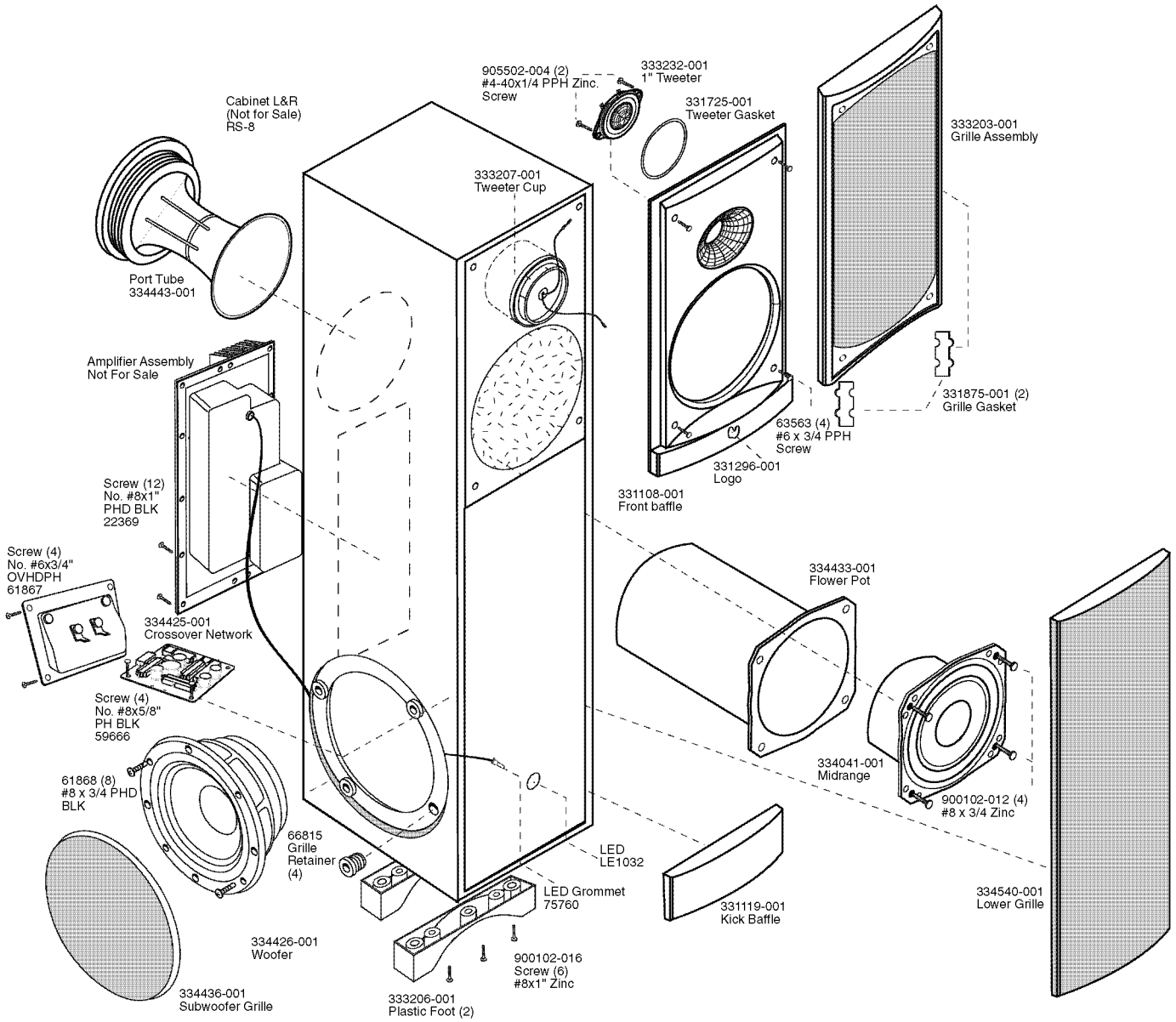
RS-8 SCHEMATIC



RS-8/RS-8a 00057

Component Exploded View

RS-8/RS-8a **Right** Loudspeaker is depicted here



To Service Subwoofer:
Carefully pry grille out of it's recess. After removing all mounting screws if woofer cannot be extracted from recess, you may have to remove the input cup (speaker terminals) or amplifier assembly to create an opening. Then a hammer or similar object can be inserted behind the woofer to tap it out.

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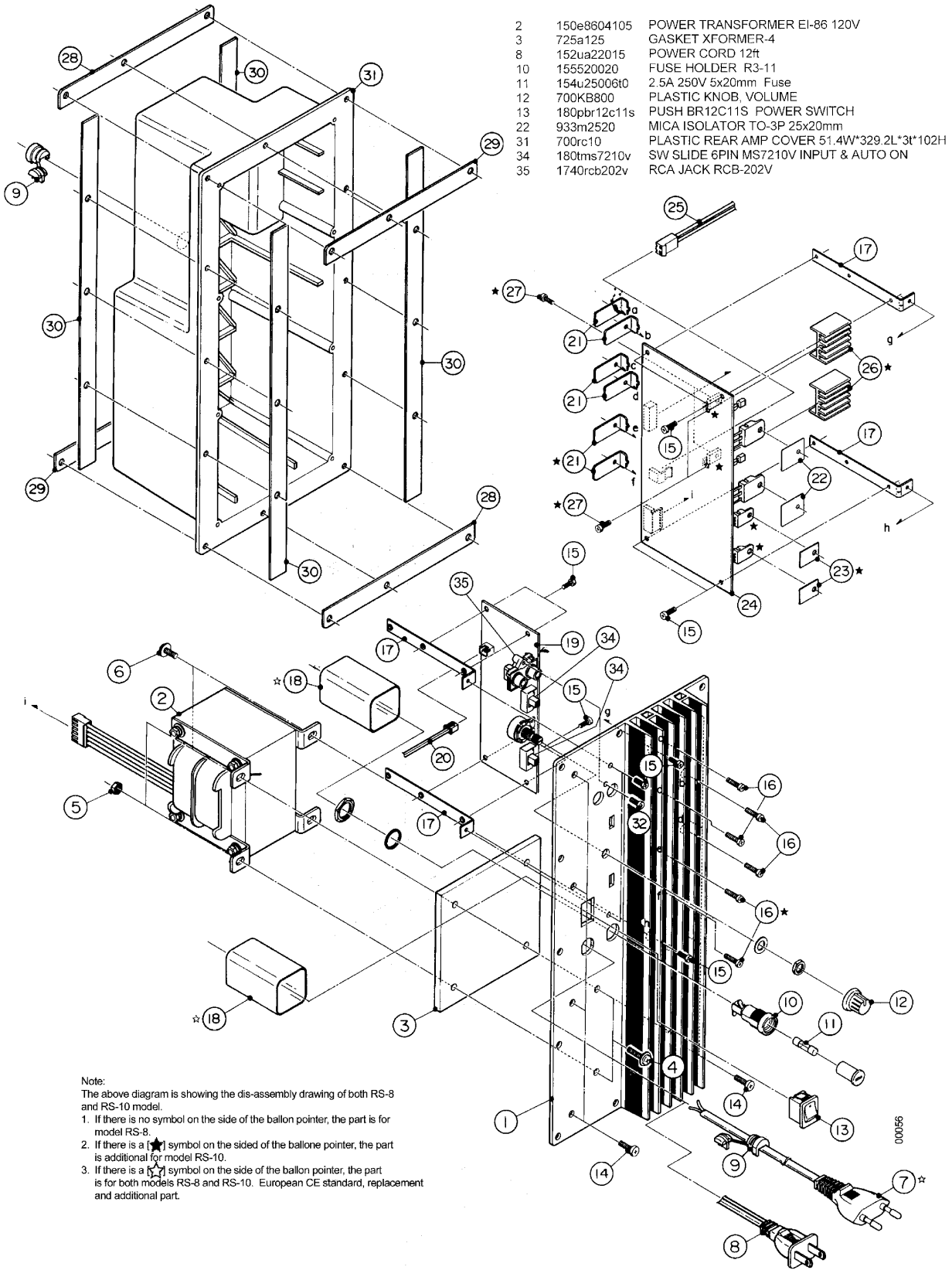
RS-8a Amplifier Exploded View

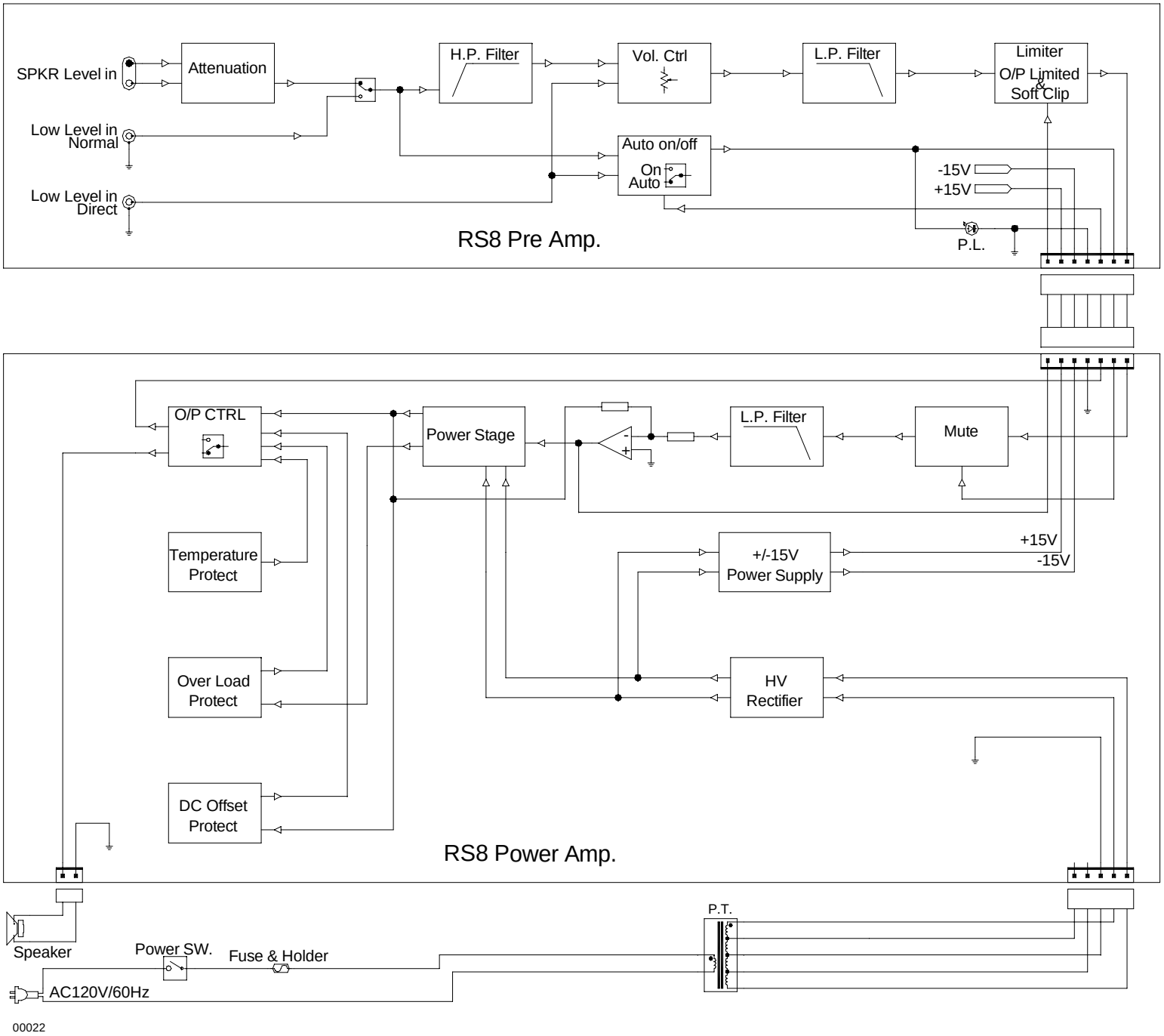


2	150e8604105	POWER TRANSFORMER EI-86 120V
3	725a125	GASKET XFORMER-4
8	152ua22015	POWER CORD 12ft
10	155520020	FUSE HOLDER R3-11
11	154u25006t0	2.5A 250V 5x20mm Fuse
12	700KB800	PLASTIC KNOB, VOLUME
13	180pbr12c11s	PUSH BR12C11S POWER SWITCH
22	933m2520	MICA ISOLATOR TO-3P 25x20mm
31	700rc10	PLASTIC REAR AMP COVER 51.4W*329.2L*3t*102H
34	180tms7210v	SW SLIDE 6PIN MS7210V INPUT & AUTO ON
35	1740rcb202v	RCA JACK RCB-202V

Note:
The above diagram is showing the dis-assembly drawing of both RS-8 and RS-10 model.

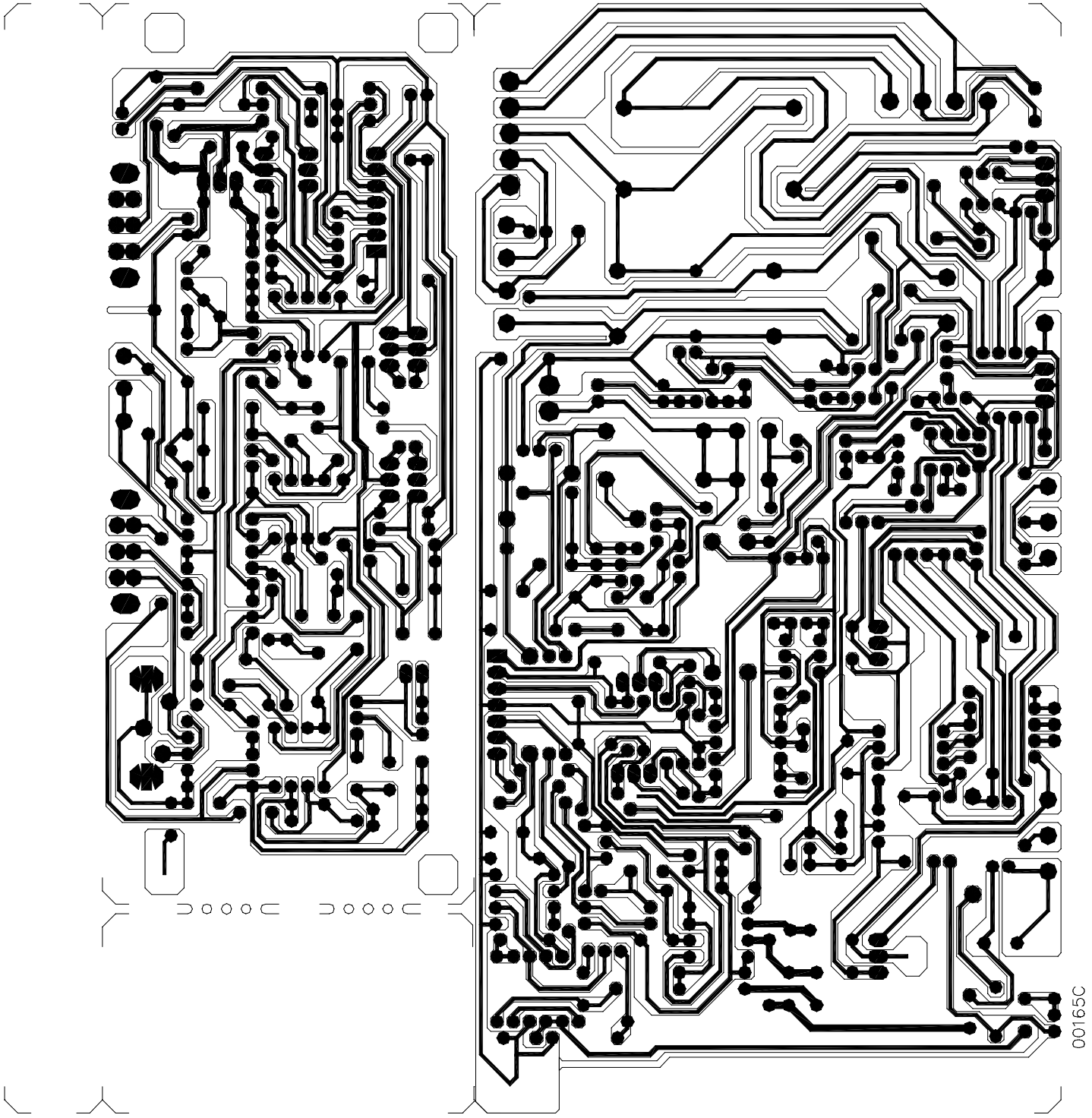
1. If there is no symbol on the side of the ballon pointer, the part is for model RS-8.
2. If there is a [★] symbol on the sided of the ballone pointer, the part is additional for model RS-10.
3. If there is a [☆] symbol on the side of the ballon pointer, the part is for both models RS-8 and RS-10. European CE standard, replacement and additional part.

Block Diagram



RS-8a Circuit Boards

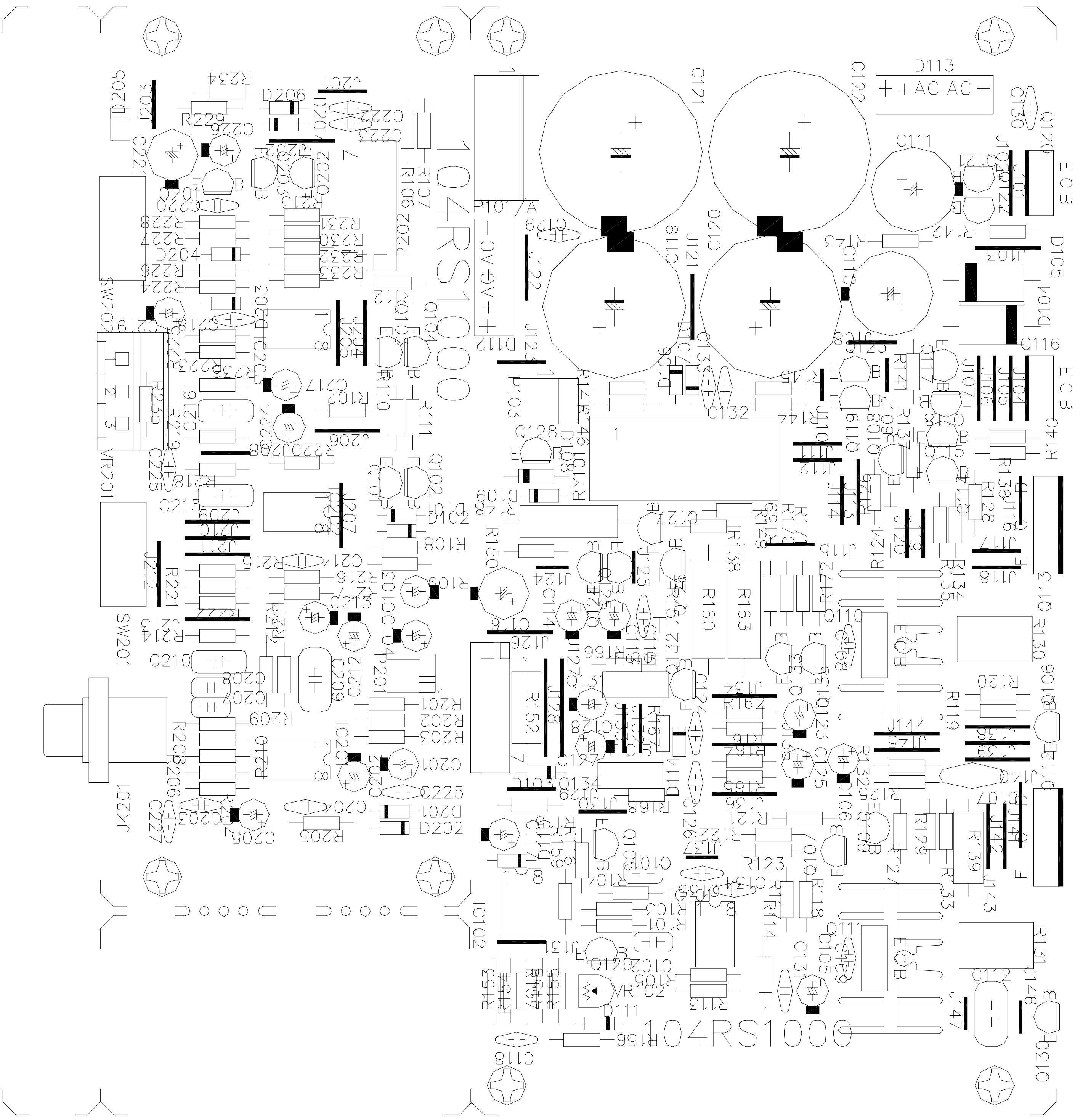
Control PCB **Main PCB**



RS-8a Circuit Boards (Cont.)

Control PCB

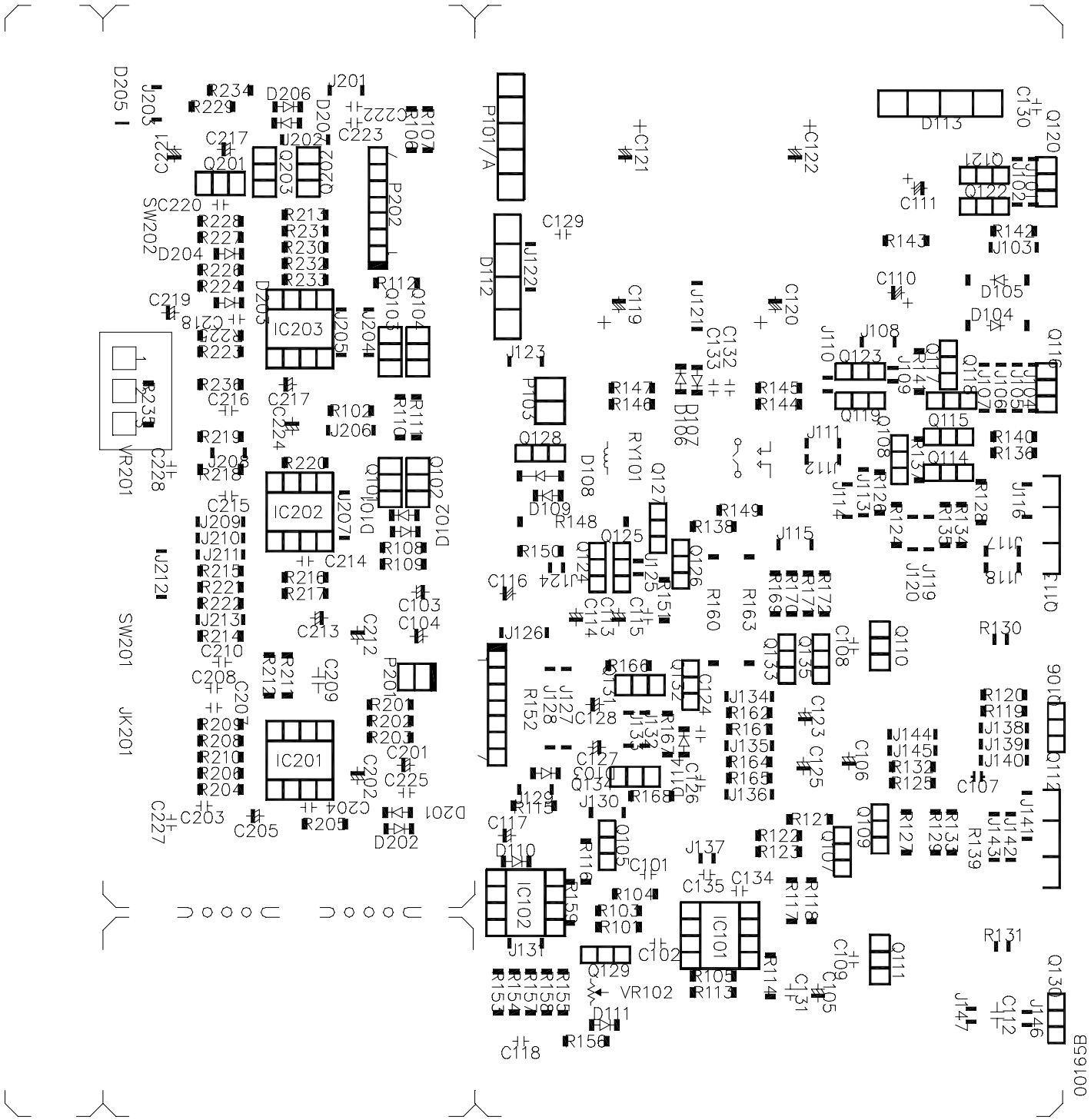
Main PCB



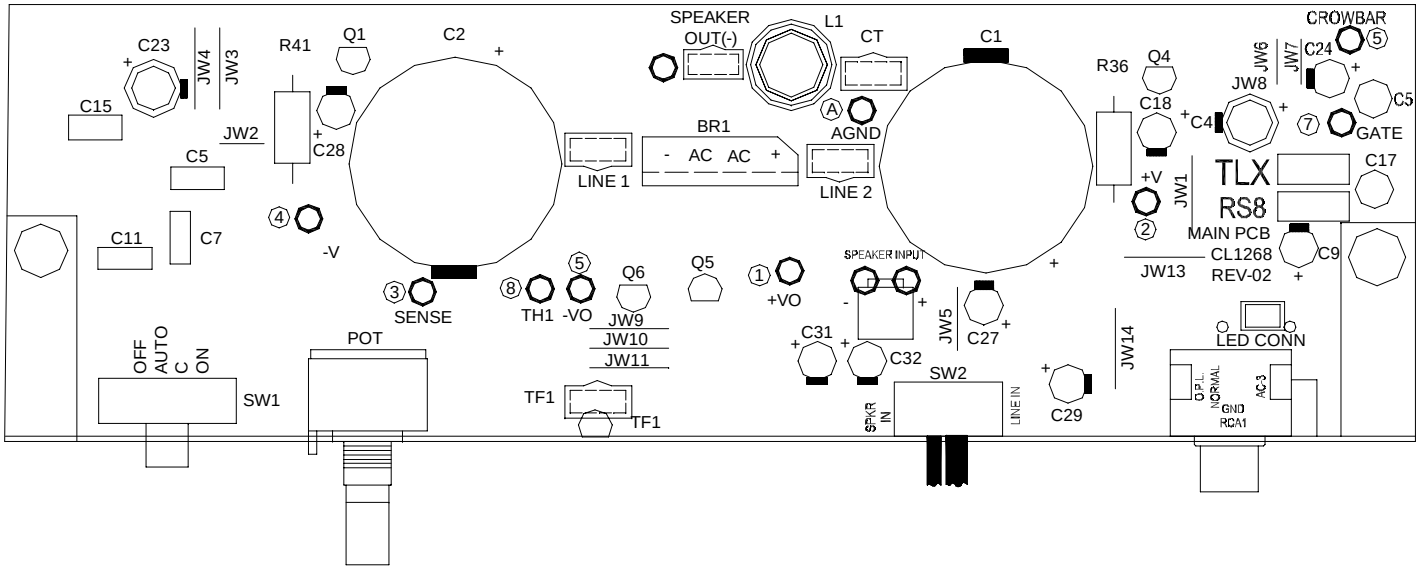
RS-8a Circuit Boards (Cont.)

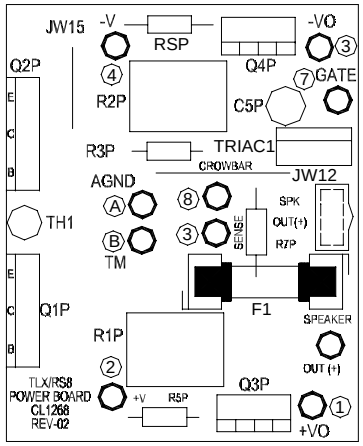
Control PCB

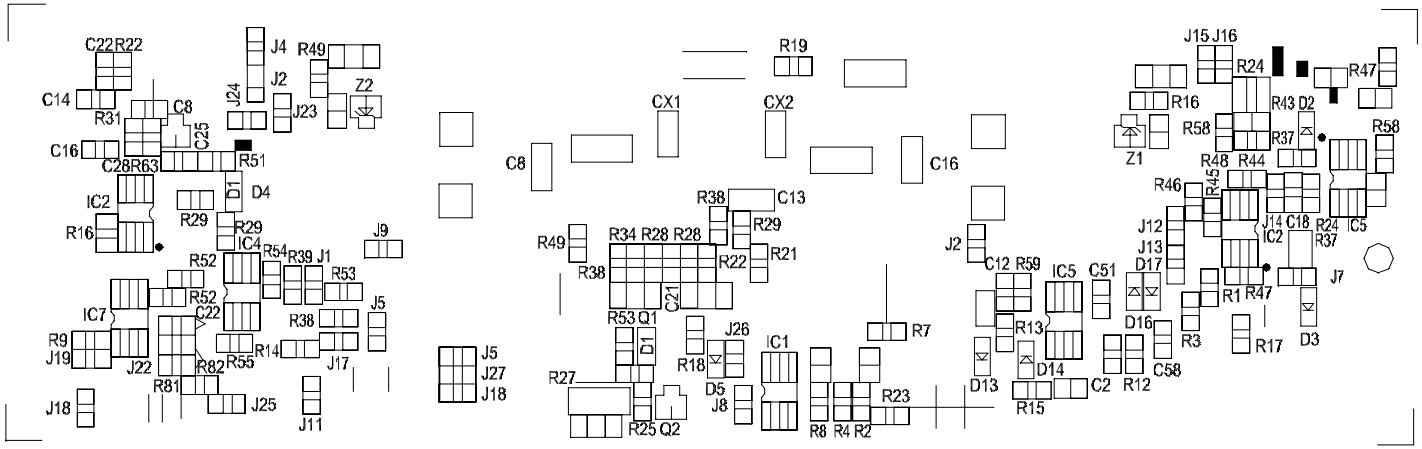
Main PCB



RS-8 Circuit Board







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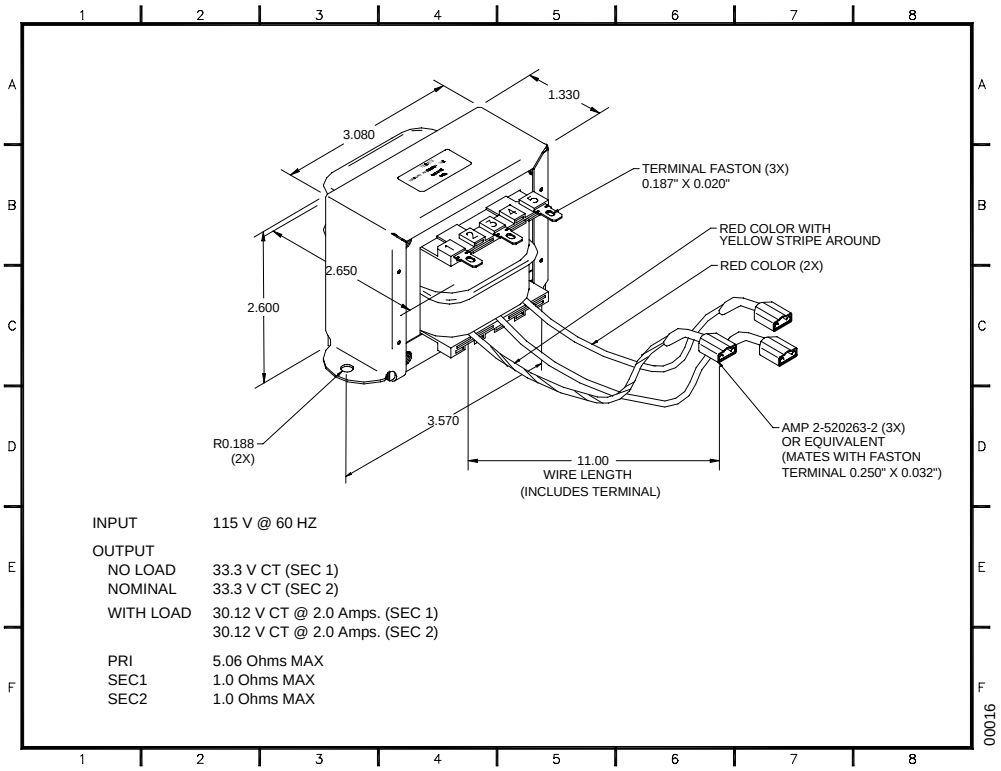
Power Transformer



INPUT	115 V @ 60 HZ
OUTPUT	
NO LOAD	33.3 V CT (SEC 1)
NOMINAL	33.3 V CT (SEC 2)
WITH LOAD	30.12 V CT @ 2.0 Amps. (SEC 1)
	30.12 V CT @ 2.0 Amps. (SEC 2)
PRI	5.06 Ohms MAX
SEC1	1.0 Ohms MAX
SEC2	1.0 Ohms MAX

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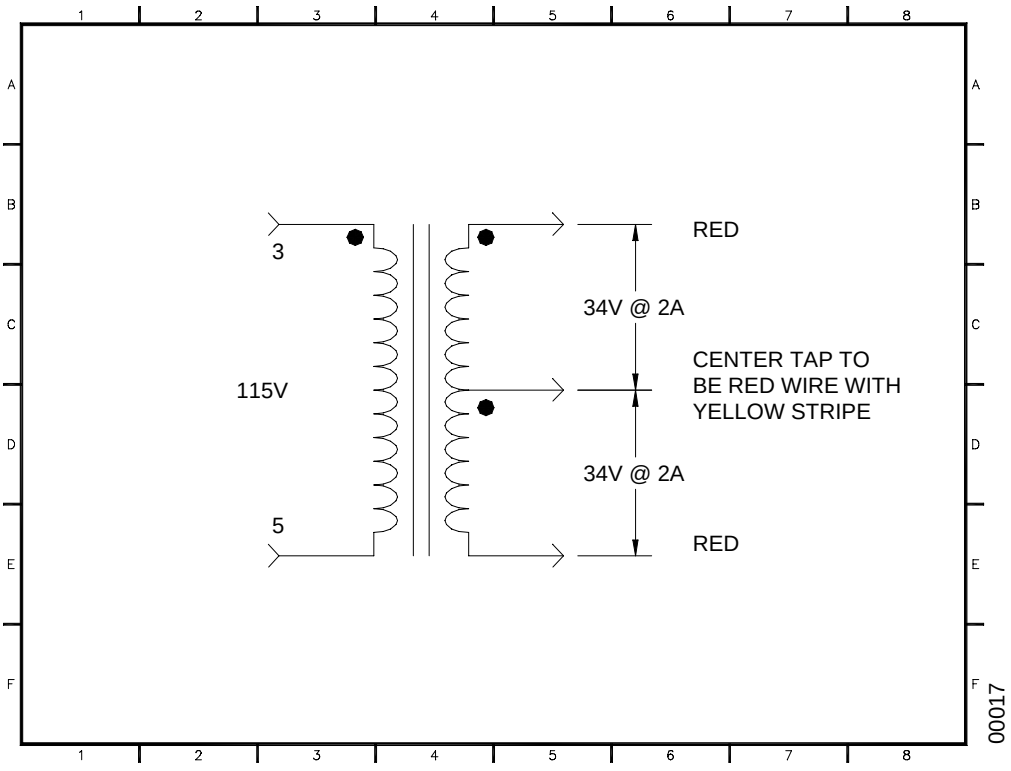

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RS-8 Electronic Parts List (120v)

Model RS-8 does not have an "m" in the serial number.
Model RS-8a has an "m" in the serial number.

Reference Designator	Part Number	Description	Quantity
	Capacitors		
C5,7,11	CP1344	Cap. Poly Fil 0.33uF 10%	3 EA
C4,23	CP1411	Cap Alum El. 100uF 20% 16	2 EA
C24,31,32	CP1415	Cap Alum El. 2.2uF 20% 50	3 EA
C9,27,29	CP1417	Cap Alum El. 22uF 20% 16	3 EA
C14,16,50,51	CP1426	SMD CAP 0.1uF 20% 50V Z5U	4 EA
C2P,3P,6P,7P	CP1438	SMD CAP 820pF 5% 100V NPO	4 EA
C20	CP1473	SMD Cap 220pF 10% 50V NPO	1 EA
C21	CP1478	SMD Cap 330pF 5% 100v NPO	1 EA
C3,12	CP1480	SMD Cap 470pF 5% 100V NPO	2 EA
C15	CP1495	Cap Poly Film 0.1uF 5% 63	1 EA
C18,33	CP1496	SMD CAP 100pF 10% 50V X7R	2 EA
C1P	CP1528	SMD CAP 0.1uF 10% 50V X7R	1 EA
C1,2	CP1545	CAP ALUM ELECT 4700uF 20%	2 EA
C8,10,13,4P	CP1552	SMD Cap .1uF 20% 100v Z5U	4 EA
C22	CP1563	SMD Cap 150pF 5% 50v NPO	1 EA
C6,5P,17	CP1579	Cap Al El 33uF 20% 16V NP	3 EA
C19,28	CP1645	Cap Al El 22uF 20% 63V 85	2 EA
CX1,CX2,CX3,CX4	CP1844	SMD CAP CERAMIC 0.01uF	4 EA
	Diodes		
	DI1099	DI, Bridge Power 600V/4A	1 EA
D1,2,3,4,5,14,15,16,17	DI1132	SMD Diode Swch LL-34 Pkg	9 EA
Z1,2	DI1150	SMD Zener 15v 5% CP Pkg.	2 EA
	Integrated Circuit		
IC1,2,3,4,5,6,7	IC1041	IC SMD DUAL J-FET-TL072	7 EA
	Resistors		
R7P	RS1245	RES C/F 220 ohm 5% 1/4W	1 EA
R7,31	RS1700	SMD RES 1Kohm 5% 1/8W	2 EA
R1,3,8,13,14,15, 18,21,23,24,27,32, 39,45,50,53,54,60, 61,62	RS1701	SMD RES 10Kohm 5% 1/8W	20 EA
R2,4,46,57,58,63	RS1702	SMD RES 100Kohm 5% 1/8W	6 EA
R37	RS1703	SMD RES 2.2Kohm 5% 1/8W	1 EA
R22,33,34	RS1705	SMD RES 4.7Kohm 5% 1/8W	3 EA
R16,42,48,49	RS1710	SMD RES 3.3Kohm 5% 1/8W	4 EA
R30	RS1711	SMD RES 220 ohm 5% 1/8W	1 EA
R12,59	RS1713	SMD RES 56Kohm 5% 1/8W	2 EA

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Electronic Parts List (Cont.)

Reference Designator	Part Number	Description	Quantity
R19,26,28,4P	RS1717	SMD RES 100 ohm 5% 1/8W	4 EA
R56	RS1722	SMD RES 470 ohm 5% 1/8W	1 EA
R47,55	RS1767	SMD RES 1 Mohm 5% 1/8W	2 EA
J1,2,3,4,5,6,7,8,9, 10,11,12,13,14,16, 17,18,19,20,22,23, 24,25,27	RS1779	SMD RES ZERO ohm 5% 1/8W	24 EA
POT1	RS1794	POTENTIOMETER 50Kohm 20%	1 EA
R9	RS1823	SMD RES 6.19Kohm 1% 1/8W	1 EA
R20,40	RS1829	SMD RES 160 ohm 5% 1/8W	2 EA
R25	RS1831	SMD RES 7.5Kohm 5% 1/8W	1 EA
R1P,2P	RS1868	RES CER 0.1 ohm 5% 5W	2 EA
R17	RS1883	SMD RES 1.5Kohm 5% 1/8W	1 EA
R35	RS1912	SMD RES 11Kohm 5% 1/8W	1 EA
R5P,6P	RS1916	RES C/F 5.1 ohm 5% 1/4W	2 EA
R51	RS1958	SMD RES 18.7Kohms 1% 1/8W	1 EA
R44	RS1968	SMD RES 2.2Mohm 5% 1/8W	2 EA
R3P	RS1994	RES C/F 100 ohms 5% 1/4W	1 EA
R36,41	RS2180	RES M/O F/P 470 ohm 5% 1W	2 EA
R10	RS2523	SMD RES 21Kohm 1% 1/8W	1 EA
R29	RS2524	SMD RES 9.31Kohm 1% 1/8W	1 EA
	Transistors		
Q1P	TR1057	NPN Pwr Xstr 25A/100v TIP35C	1 EA
Q2P	TR1061	PNP Pwr Xstr 25A/100v TIP36C	1 EA
Q7	TR1063	NPN Xstr 40v/600mA MPS2222A	1 EA
Q2	TR1108	SMD Xstr NPN 50V/150mA 2SC2412K	1 EA
Q6	TR1131	SMD Xstr NPN 50v/100mA DTC114TK	1 EA
Q8	TR1166	PNP Xstr 150v/600mA 2N5401	1 EA
Q5	TR1167	NPN Xstr 160v/600mA 2N5551	1 EA
Q4P	TR1183	NPN Pwr Xstr 3A/100v/40W TIP31C	1 EA
Q3P	TR1184	PNP Pwr Xstr 3A/100v/40W TIP32C	1 EA
Q4	TR1253	NPN XSTR 80V/500mA MPSW06	1 EA
Q1	TR1254	PNP XSTR 80V/500mA MPSW56	1 EA
	Misc		
	BR1187	Alum. Bar 4.8mmx12.7mmx40	1 EA
SUPPORT BOARD	BR1395	Bracket Pwr Support Bass5	2 EA
	BR1625	BRACKET, SHIELD	1 EA
	CL1268	CLUSTER TLX271P/RS8	1 EA
RCA1	CO1076	RCA Jack Dual Gold Red/Wh	1 EA
LED1	CO1304	Header Stght 2-Pos 0.079"	1 EA
SPEAKER INPUT	CO1343	Strght Sq Hdr 0.156"Cente	1 EA
	CO1305	Housing 2-Pos 0.079"	2 EA
	CO1344	HOUSING 2-POSITION 0.156"	1 EA
F2	FH1009	FUSEHOLDER 1/4x1-1/4	1 EA
F2	FS1063	Fuse Fast Blow 3A 250V 3A	1 EA

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Electronic Parts List (Cont.)

Reference Designator	Part Number	Description	Quantity
F1	FS1074	Fuse Slow Blow 6.3A 250V	1 EA
"2"	HA1091	Green Wire Assy.	1 EA
"1"	HA1092	Blue Wire Assy.	1 EA
"3"	HA1093	Gray Wire Assy.	1 EA
"A","B"	HA1094	Black Wire Assy.	2 EA
"4"	HA1095	White Wire Assy.	1 EA
"5"	HA1096	Purple Wire Assy.	1 EA
"6"	HA1097	Red/ Black Wire Assy.	1 EA
"7"	HA1098	Red Wire Assy.	1 EA
XMER-FUSEHOLDER	HA1100	Jumper 0.187" / Stripped	1 EA
	HA1228	HARNESS SILVER WIRE 42"	1 EA
	HA1229	HARNESS COPPER WIRE 42"	1 EA
SPEAKER INPUT	HA1236	HARNESS SPKR INPUT RS8	1 EA
	HS1198	HEATSINK TLX/HLS/RS-8	1 EA
	LB1265	Bar Code Traceability Lab	1 PC
	LB1339	FRONT LABEL RS-8 DOMESTIC	1 EA
PLASTIC COVER	LB1356	LABEL 4 OHM IMPEDANCE	1 EA
	LE1032	Led Bicolor Red/Green 5mm	1 EA
	LS1062	EPOXY ADHESIVE TWO-PARTS	0 EA
T1	MI1128	Transformer, 115 V	1 EA
L1	MI1129	Air Core Inductor 1.8uH	1 EA
JUMPER WIRES	MS1065	Nylon Cable Tie 3"L Nat.	3 EA
BRACKET SUPPORT	NU1057	Hex Nut Keps 6-32 Zinc Fs	2 EA
	PM1366	Gasket for BASS20/16	1 EA
CR3 CATHODE TO XMER SCREW	SA0000022	Ground Harness	1 EA
	SA1966	AXIAL ASY TLX271P/RS8/HLS	1 EA
	SA1984	RADIAL ASSY RS8	1 EA
	SA1985	SMD ASSY RS8	1 EA
	SA1986	MANUAL ASSY RS8	1 EA
	SA1987	CLUSTER ASSY RS8	1 EA
	SA2018	LED ASSY RS8	1 EA
	SC1192	Sc 6-32x3/4 Cutt-Thr Hex	1 EA
TRANSFORMER & BRACKET SUPPORT	SC1194	Sc 6-32x3/8 Tapt-Thr Hex	4 EA
SHIELD BRACKET	SC1194	Sc 6-32x3/8 Tapt-Thr Hex	2 EA
RCA	SC1215	Sc M3x1.25x10 Plas-Thr Pa	1 EA
BRACKET SUPPORT	SC1286	SC 6-32X1/2 MACH-THR PAN	2 EA
	SP1073	Sil Pad TO-3P 1.0" x 0.75	2 EA
	SP1082	SPONGE W/ADHESIVE	2 EA
SW1	SW1070	Switch Slide SP3T Right A	1 EA
SW2	SW1084	SWITCH SLIDE DPDT R/A	1 EA
	TE1002	Terminal Ring	1 EA
	TE1050	Terminal Ultra Fast Ins.	2 EA

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RS-8 Electronic Parts List (120v) Continued.

Reference Designator	Part Number	Description	Quantity
	TE1050	Terminal Ultra Fast Ins.	1 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	4 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	2 EA
	TE1110	Terminal Pocket	2 EA
	TE1125	Terminal Ultra Fast Ins.	1 EA
	TE1125	Terminal Ultra Fast Ins.	1 EA
	TE1125	Terminal Ultra Fast Ins.	2 EA
	TE1125	Terminal Ultra Fast Ins.	1 EA
	TE1173	Crimp Terminal 22-30 AWG	4 EA
CT, LINE 1, LINE 2, TF1, SPKR(+)	TE1175	TERMINAL MALE TAB 0.250"	5 EA
SPKR(-)	TE1187	TERM MALE TAB 0.187"	1 EA
	TE1188	TERMINAL CRIMP 18-24AWG	2 EA
TH1	TH1006	NTC THERMISTOR 10Kohm @	1 EA
TRIAC1	TY1001	Triac 200V 25A TO-220	1 EA
	WA1032	Washer Plain #6 Zinc Fini	2 EA
	WA1049	Washer Ext. Tooth #6 Zinc	3 EA
SHIELD BRACKET	WA1049	Washer Ext. Tooth #6 Zinc	2 EA
JW1,2,3,4,5,6,7, 8,9,10,11,12,13,14,JW15	WI1553	Wire #22 Bare Solid Tinne	3 FT
	WI1598	Wire #18 Magnet Heavy Red	0 LB
	WI1613	Wire #18 16x30 UL1007 Whi	1 FT
	WI1615	WIRE 18AWG 16x30 UL1007	1 FT
	WI1615	WIRE 18AWG 16x30 UL1007	1 FT
	WI1627	Wire #22 7x30 UL1007 Gray	1 FT
	WI1628	Wire #22 7x30 UL1007 Blue	1 FT
	WI1629	Wire #22 7x30 UL1007 Blac	2 FT
	WI1629	Wire #22 7x30 UL1007 Blac	2 FT
	WI1637	Wire #18 7x26 UL1015 Blue	0 FT
	WI1638	Wire #20 10x30 UL1007 Pur	1 FT
	WI1654	Wire #26 7x34 UL1007 Whit	3 FT
	WI1655	Wire #26 7x34 UL1007 Blac	3 FT
	WI1657	Wire #18 16x30 Red/Black	1 FT
	WI1669	Wire #22 7X30 UL1007 Red	2 FT
	WI1671	Wire #18 16x30 UL1007 Red	1 FT
	WI1674	Wire Speaker Copper Singl	2 FT
	WI1675	Wire Speaker Silver Singl	2 FT
	XX1174	AC CORD DOMESTIC 6 FT	1 EA
	XX1250	Strain Relief SPT-1 Black	1 EA
F1	XX1297	Fuse Clip 5x20 PC Mount	2 EA
	XX1381	PLASTIC COVER TLX/HLS/RS8	1 EA
PLASTIC COVER	XX1385	STRAIN RELIEF BLK 6P3-4	1 EA
	XX1395	GASKET 2.0 x 0.38 x 0.063	1 EA
	XX1396	PLASTIC KNOB W/POSITION	1 EA

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RS-8a Electrical Parts List

Model RS-8 does not have an "m" in the serial number.
Model RS-8a has an "m" in the serial number.

Part Number	Qty	Designator	Description
Part Number	Qty	Designator	Description
Resistors			
11014100j26	3	R112,128,129	10 ohms 1/4W 5% CF 26mm
11014101j26	2	R124,125	100 ohms 1/4W 5% CF
11014102j26	3	R135,170,171	1K 1/4W 5% CF 26mm
11014103j26	9	R105,116,201,204-206,215,218,230	10K 1/4W 5% CF
11014104j26	4	R108,109,202,203	100K 1/4W 5% CF 26mm
11014105j26	2	R159,233	1M 1/4W 5% CF 26mm
11014124j26	2	R169,172	120K 1/4W 5% CF 26mm
11014151j26	1	R225	150 ohms 1/4W 5% CF 26mm
11014152j26	2	R113,134	1.5K 1/4W 5% CF 26mm
11014153j26	3	R121,166,168	15K 1/4W 5% CF 26mm
11014154j26	1	R224	150K 1/4W 5% CF 26mm
11014182j26	1	R167	1.8K 1/4W 5% CF 26mm
11014183j26	1	R231	18K 1/4W 5% CF 26mm
11014204j26	1	R235	200K 1/4W 5% CF 26mm
11014221j26	2	R110,111	220 ohms 1/4W 5% CF 26mm
11014222j26	3	R162,165,234	2.2K 1/4W 5% CF 26mm
11014223j26	6	R103,104,115,213,227,228	22K 1/4W 5% CF 26mm
11014224j26	2.	R208,210	220K 1/4W 5% CF 26mm
11014271j26	1	R107	270 ohms 1/4W 5% CF 26mm
11014275j26	1	R229	2.7M 1/4W 5% CF 26mm
11014332j26	7	R102,106,117,118,136,161,164	3.3K 1/4W 5% CF
11014333j26	2	R101,137	33K 1/4W 5% CF 26mm
11014392j26	2	R122,123	3.9K 1/4W 5% CF 26mm
11014470j26	1	R133	47 ohms 1/4W 5% CF 26mm
11014471j26	3	R126,127,209	470 ohms 1/4W 5% CF 26mm
11014472j26	4	R151,156,157,232	4.7K 1/4W 5% CF 26mm
11014473j26.	9	R138,149,150,158,216,217,221-223	47K 1/4W 5%
11014510j26	1	R132	51 ohms 1/4W 5% CF 26mm
11014562j26	2.	R155,120	5.6K 1/4W 5% CF 26mm
11014563j26	1	R114	56K 1/4W 5% CF 26mm
11014622j26	1	R119	6.2K 1/4W 5% CF 26mm
11014682j26	1	R153	6.8K 1/4W 5% CF 26mm
11014911j26	1	R154	910 ohms 1/4W 5% CF 26mm
116142102f26	1	R212	21.0K 1/4W 1% MF 26mm
116142203f26	1	R236	220K 1/4W 1% MF 26mm
116142702f26	1	R220	27.0K 1/4W 1% MF 26mm
116145602f26	1	R219	56.0K 1/4W 1% MF 26mm
116146191f26	1	R211	6.19K 1/4W 1% MF 26mm
11010332j52	1	R152	3.3K 1W 5% CF 52mm
11010561j15	1	R160,163	560 ohms 1W 5% CF 15mm
11012100j12	1	R139	10 ohms 1/2W 5% CF 12.5mm
11014222j10	1	R173	2.2K 1/4W 5% CF 10mm
11020681j52	1	R148	680 ohms 2W 5% 52mm
11350r10j20	1	R130,131	0.1 ohms 5W 5%
11403302m0	1	VR102	3K 0.3W 20% BIAS POT
115v104b1	1	VR201	100K/1 GANG VOLUME POT
Capacitors			
1302b101k503	2	C108,109	100P 50V 10%
1302b221k503	4	C203,204,214,218	220P 50V 10% @0.145
1302b681k503	1	C228	680P 50V 10%
1302f104m503	1	C107	0.1UF 50V 20%
1302f104z503	8	C118,124,126,134,135,220,222,223	0.1UF 50V +80/-20%
1303f102k503	2	C137,225	0.001UF 50V 10%
1303f473m503	1	C227	0.047UF 50V 20%
132102j503	1	C102	0.001UF 50V 5%
132103j503	1	C207	0.01UF 50V 5%

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Electrical Parts List (Cont.)

Part Number	Qty	Designator	Description
132104j503	1	C208	0.1UF 50V 5%
132222j503	1	C101	0.0022UF 50V 5%
1353105m50	2	C106,217	1UF 50V 20%
1353106m50	6.	C103,104,205,212,213,219	10UF 50V 20% @0.34
1353107m16	4	C117,127,128,226	100ufF 16V 20% @0.49
1353226m50	5	C113,114,123,125,224	2UF 50V 20%
1353227m16	1	C221	220UF 16V 20%
1353475m50	2	C201,202	4.7UF 50V 20%
1353476m25	1	C105	47UF 25V 20% @0.45
1353477m10	1	C116	470UF 10V 20% 52mm
130sl101k504	1	C229	100P 50V +350/-1000
132104j504	1	C112,136,216	0.1UF/50V 5%
132124j504	1	C215	0.12UF 50V 5%
132223kb50	1	C130	0.022UF 250V 10% VDE
132334j504	1	C209	0.33UF 50V 5%
1354107m16	1	C115	100UF 16V 20%
1354688m50	1	C121,122	6800UF/50V 20%
1302g472md00	1	C001	4700P 400V 20%
Semiconductors			
192027c1815gr	15	Q101,103,105-107,124-126, 128,103,132,133,201,202,203	2SC1815GR NPN @0.51 500mA TO-92
192028a1015gr	4	Q102,104,129,135	2SA1015GR PNP @0.51 500mA TO-92
9006m4558d	3	IC101,201,202,203	4558D Dual Op-Amp
19016lm311n	1	IC102	LM311 Comparator
192021d669a	1	Q111	2SD669A NPN
192021tip35c	1	Q113	TIP35C NPN
192022tip36c	1	Q112	TIP36C PNP
192022b649a	1	Q110	2SB649A PNP
1921672n5551	2	Q108,104	2N5551 500mA TO-92
1921682n5401	2	Q109,115	2N5401 AI-PNP 350V 500mA TO-92
192201d882y	1	Q131	KSD882Y NPN
192202b772y	1	Q134	KSB772Y PNP
19510336egw	1	D205	LED 336EGW
19700kbl405	1	D113	4A 500V KBL405
197101n4002	1	D108	1N4002 @0.24
197131n4148	10	D101-103,109,111,201,202,204,206,207	1N4148 26mm @0.18 Small Signal diode
19915000333	1	D203	3.3V 1/2W 26mm Zener Diode
19915000623	1	D110	6.2V 1/2W 26mm Zener Diode
19915001503	1	D114	15V 1/2W 26mm Zener Diode
Miscellaneous			
150e8604105	1		POWER TRANSFORMER EI-86 120V
152ua22015	1	AC001	POWER CORD 12ft
1740rcb202v	1	JK201	RCA JACK RCB-202V
171ugs212l	1	RY101	RELAY MI-SH-212L @22
154u25006t0	1	FS001	2.5A 250V 20mm
155520020			FUSE HOLDER R3-11
180pbr12c11s	1	SW001	PUSH BR12C11S POWER SWITCH
180tms7210v	2	SW201,2	SW SLIDE 6PIN MS7210V INPUT & AUTO ON
16210085001			WIRE 80mm AWG28 ¨åÅY-é¥ÖÅáÁí 3mm
16250129001			CABLE ASS'Y ±Æ½u 120mm AWG28 WHT
1751c02v01			P201,D205 connector 2PIN PITCH=2.5mm
1751c07v01			P101 connector, 7 7PIN PITCH=2.5mm
1751d02v01			P103 connector, 2PIN PITCH=3.96mm
1751d05v01			Connector 5PIN 3.96mm
16210082007			WIRE RED 18AWG 80mm #1015
16251229001			CABLE ASS'Y ±Æ½u 1220mm AWG WHT
16251532003			CABLE ASS'Y #205 1530mm AWG20 RED UL
16251534001			CABLE ASS'Y 1530mm+/-10mm AWG22 YEL
176wjce1			Close end terminal CE-1
1933m2520			MICA ISOLATOR TO-3P 25x20mm
650ih125			IC-4 IC HOLDER
700rc10			PLASTIC REAR AMP COVER 51.4W*329.2L*3t*102H
723a10			CUSHION EVA 300*14.2*1t

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Electrical Parts List (Cont.)

Part Number	Qty	Designator	Description
723b10			CUSHION EVA 150.7*14.2*1t
723c10			CUSHION EVA EVA 150.7*14.2*1t
725a125			GASKET XFORMER-4
Screws			
06-m30809			TO BRKT-4
06-m31204			TO IC/H-4
06-m41013			MER-2
06-m41605			MER-2
06-n4hw01			MER-2
06-t31004			TO RCA JACK-1
06-t4165013			TO R/C-8
06-m30809			TO BRKT-8

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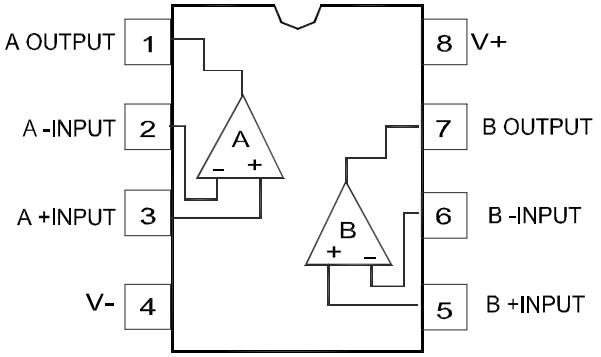
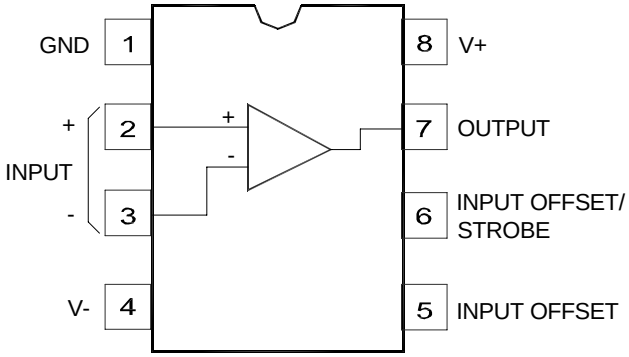
Integrated Circuit Diagrams

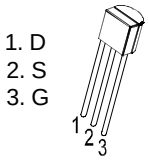
4558 DUAL OP AMP,
DUAL IN-LINE PACKAGE
(TOP VIEW)
IC101,102,201,202,203



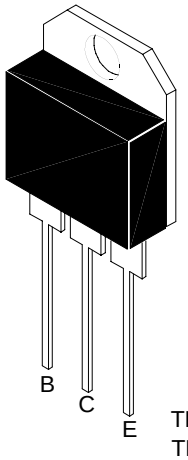
LM311 COMPARATOR,
IC102



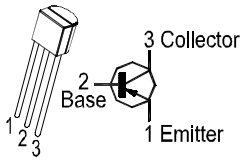
JFET - TL072,
IC1041



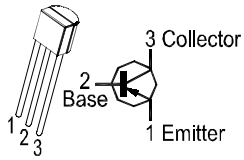
TIP31C, TIP32C,
TR1183, 1184



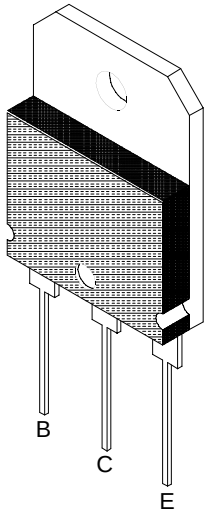
TRANS, PNP, 2N5401 TO-92
MPSW56
Q109,115, TR1166



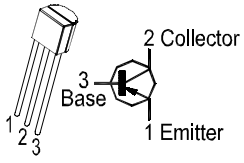
TRANS, NPN, 2N5551 TO-92,
MPSW06,MPS2222A
Q108,104,TR1167, TR1253, TR1063



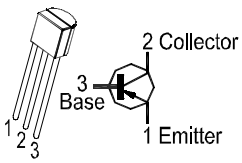
TIP35C NPN,
TIP36C PNP,
TR1057,1061,
Q113,112



TRANS, PNP,
2SA1015GR, 2SB649A,
KSD882Y
Q102,104,129,135,110,
134,TR1254

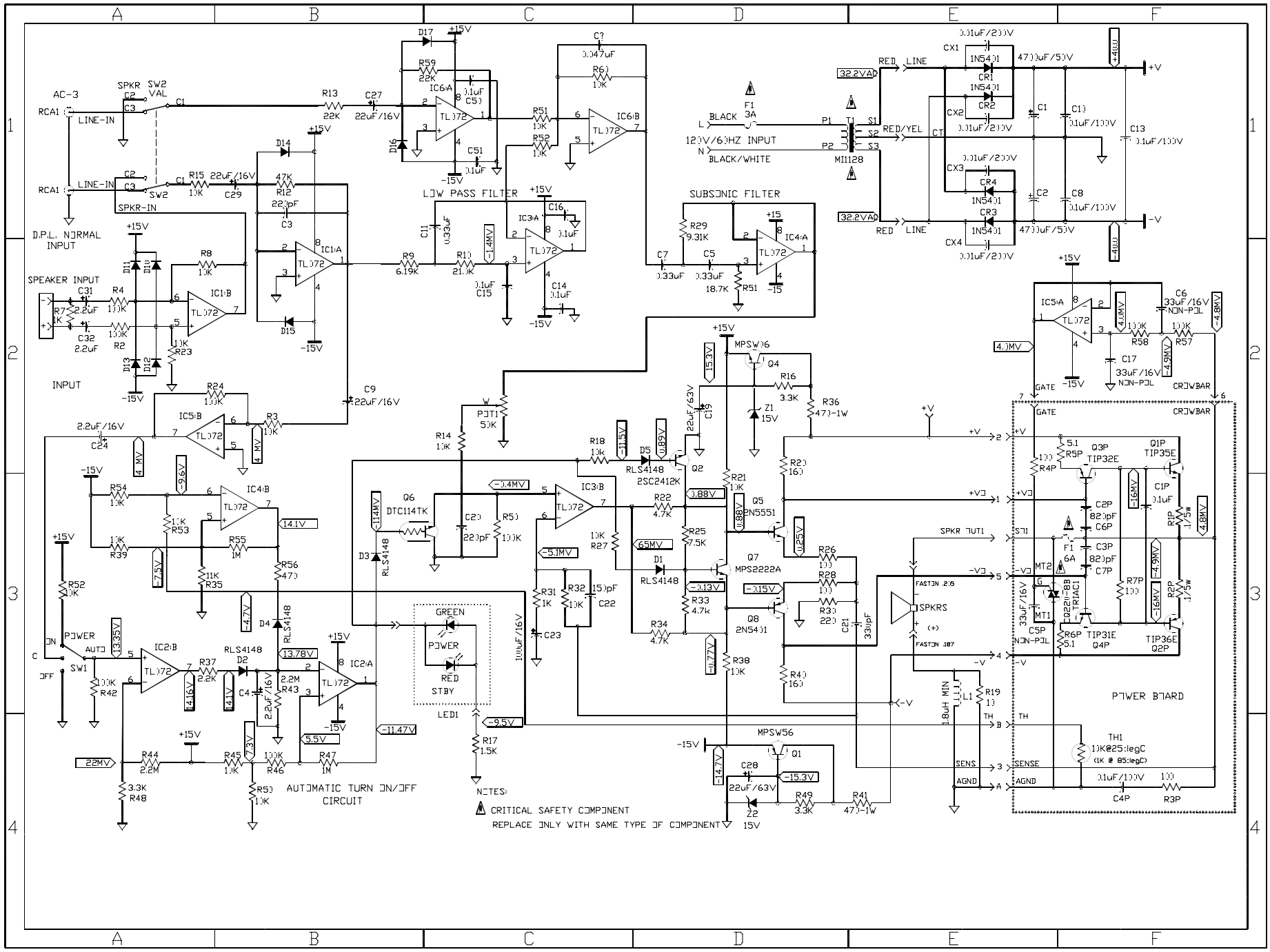


TRANS, NPN,
2SD669A,KSD882Y,2SC2412K,
DTC114TK,
Q111,131,TR1108,TR1131

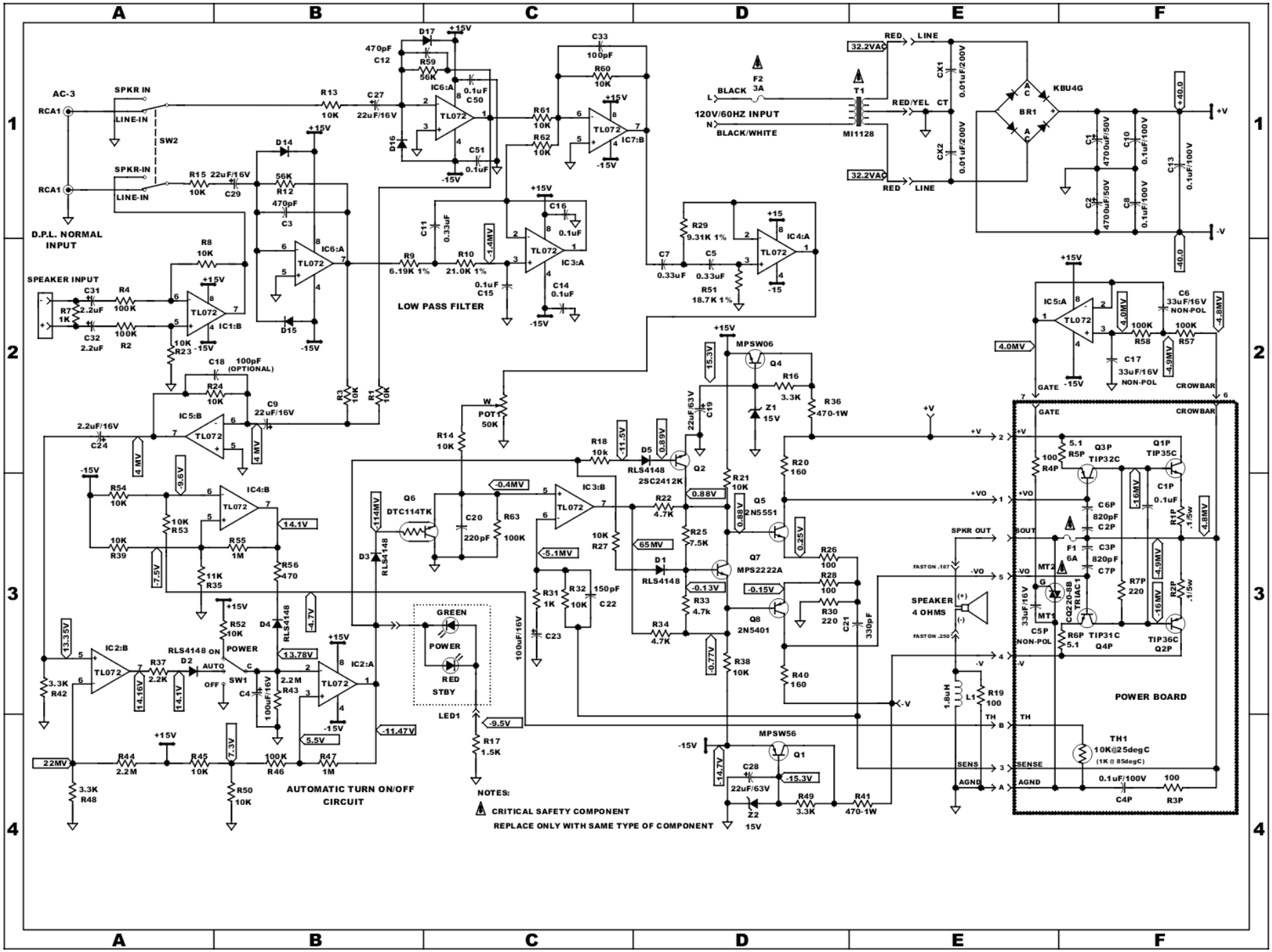


00528

RS-8 Rev 0 Schematic

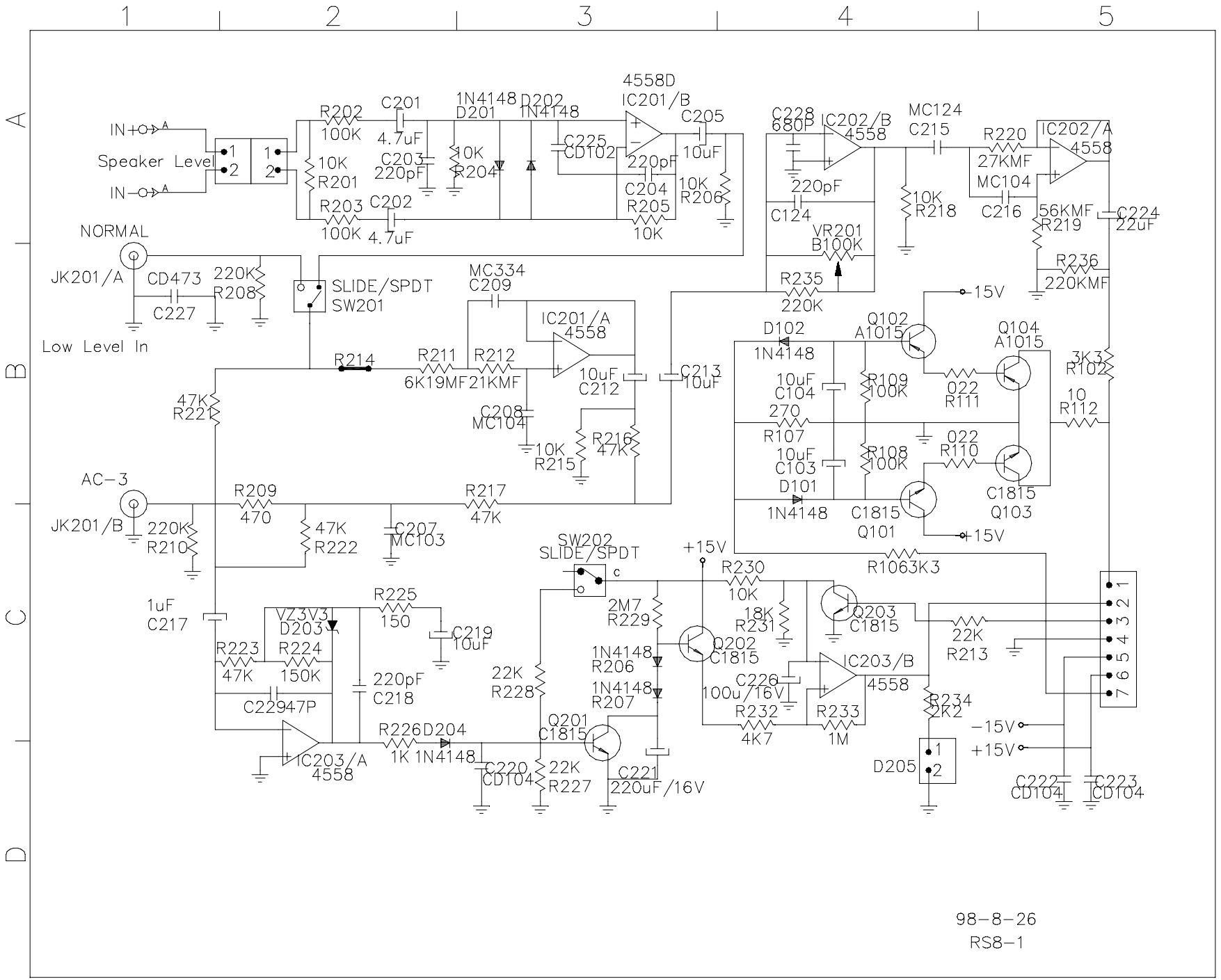


RS-8 Rev1 Schematic

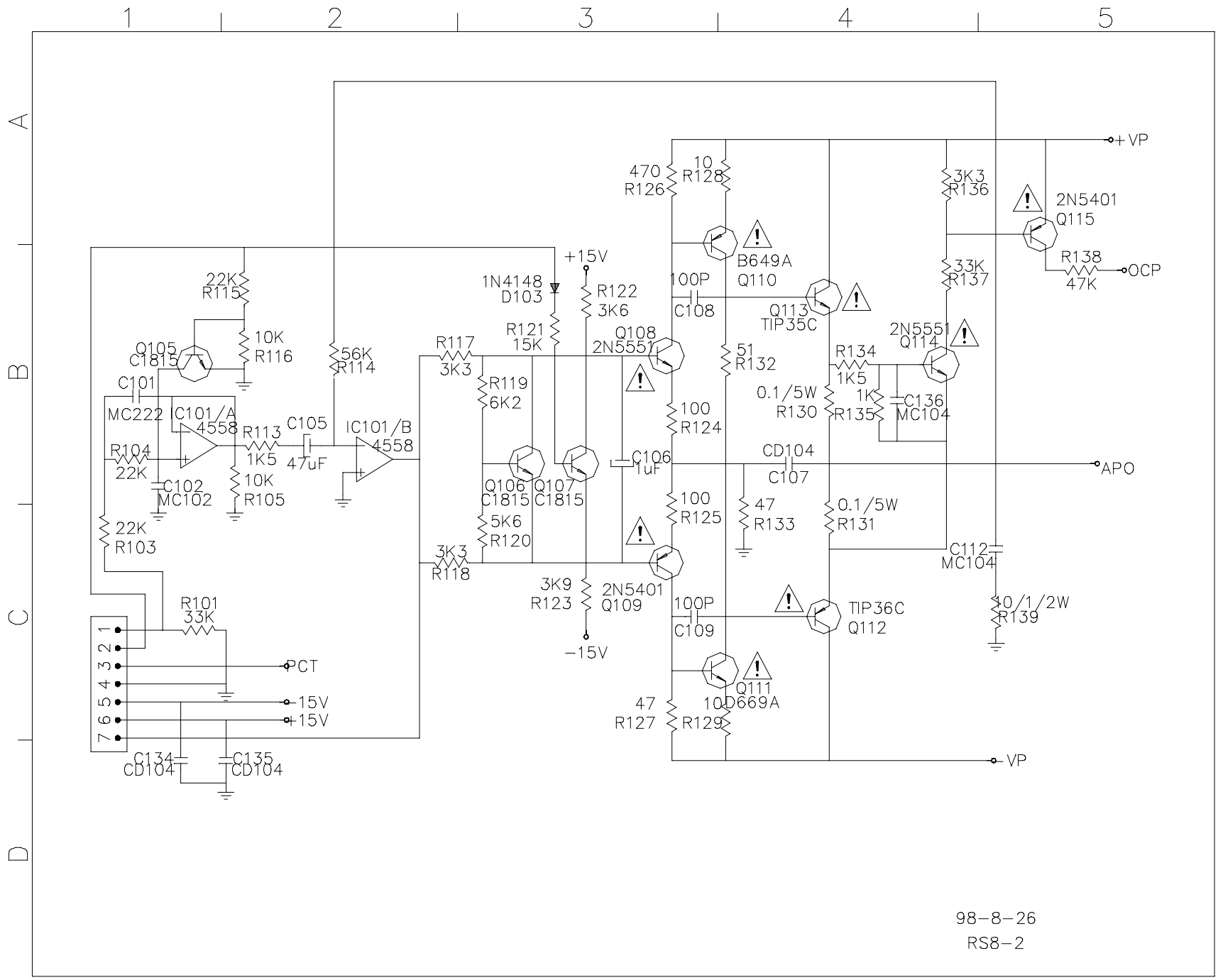


00018

RS-8a Schematics



RS-8a Schematic(Cont.)



RS-8a Schematics (Cont.)